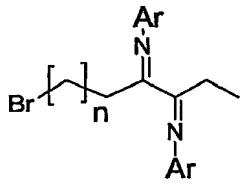
CLAIMS.

1. A method for preparing a supported catalyst com ponent comprising the steps of:

a) providing a halogenated bisimine precursor component of formula (I)



(I)

b) reacting the halogenated bisimine precursor with an ionic liquid precursor in a solvent to prepare an ionic liquid;

c) reacting the ionic liquid prepared in step b) with a metallic precursor of formula (II)

L_2MY_2 (II)

wherein L is a labile ligand, M is a metal selected from Ni o r Pd and Y is a halogen

d) retrieving a supported single site catalyst component.

2. The method of claim 1 wherein the ionic liquid precursor is N -alkyl-imidazolium or pyridinium.

3. The method of claim 1 or claim 2 wherein between step b) and step c), the reaction product of step b) is reacted with an ionic compound C^+A^-, wherein

C^+ is a cation selected from K^+, Na^+, NH_4^+, and A^- is an anion selected from PF_6^-, SbF_6^-, BF_4^-, $(CF_3\text{-}SO_2)_2N^-$, $ClO4^-$, $CF_3SO_3^-$, NO_3^- or $CF_3CO_2^-$.

4. The method of any one of t he preceding claims wherein the solvent used in steps b) and step c) is selected from THF, CH_2Cl_2 or CH_3CN.

5. A catalyst component supported on an ionic liquid obtainable by the method of any one of claims 1 to 4.

6. A catalyst system supported on an ionic li quid comprising the catalyst component of claim 5 and an activating agent.

7. The catalyst system supported on an ionic liquid of claim 6 wherein the activating agent is methylaluminoxane .

8. The catalyst system supported on an ionic liquid of claim 7 wherein the amount of methylaluminoxane is such that the Al/M ratio is of from 100 to 1000.

9. A method for homopolymerising or copolymerising alpha -olefins that comprises the steps of:

a) injecting the catalytic system supported on an ionic liquid of any one of claims 6 to 8 with an apolar solvent into the reactor;
b) injecting the monomer and optional comonomer into the reactor;
c) maintaining under polymerisation conditions;
d) retrieving the polymer under the form of chips or blocks.

10. The method of claim 9 wherein the apola r solvent is n-heptane.

11. The method of claim 9 or claim 10 wherein the monomer is ethylene or propylene.

12. A polymer under the shape of chips and blocks obtainable by the process of any one of claims 9 to 11.

13. The polymer of claim 12 wherein the amount of c hips is of less than 25 wt%, based on the total weight of the polymer.